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January 27, 2017

**VIA ELECTRONIC FILING**

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

Re: **Duke Energy Progress, LLC – Monthly Power Plant Performance Report**
**Docket No. 2006-224-E**

Dear Mrs. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of December 2016.

Should you have any questions regarding this matter, please do not hesitate to contact me at 803.988.7130.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Shannon Bowyer Hudson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan



**Period: December, 2016**

| Station | Unit | Date of Outage | Duration of Outage | Scheduled / Unscheduled | Cause of Outage | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|---|
| Brunswick | 1 | None | | | | | |
| | 2 | None | | | | | |
| Harris | 1 | None | | | | | |
| Robinson | 2 | None | | | | | |

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
### December 2016

## Lee Energy Complex

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 1C | 12/1/2016 11:00:00 PM To 12/3/2016 4:42:00 PM | Unsch | 4860 | Generator Neutral Grounding Equipment | CT01C Tripped due to 86G lockout | |
| ST1 | 12/14/2016 12:18:00 AM To 12/14/2016 7:55:00 PM | Unsch | 6134 | Other Main Steam Valves (including Vent And Drain.) | CRH Safety 001-444-PSV-9001 opened and would not reset. | |
| ST1 | 12/14/2016 10:02:00 PM To 12/17/2016 6:00:00 PM | Unsch | 6134 | Other Main Steam Valves (including Vent And Drain.) | CRH Safety 001-444-PSV-9001 opened and would not reset. | |

## Mayo Station

No Outages at Baseload Units During the Month.

## Richmond County Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 7 | 12/17/2016 12:00:00 AM To 12/18/2016 3:00:00 PM | Sch | 6134 | Other Main Steam Valves (including Vent And Drain.) | HP to HRH line cracked | |
| 7 | 12/29/2016 6:01:00 AM To 12/29/2016 6:06:00 AM | Unsch | 9020 | Lightning | Lightning opened Generator Breaker | |
| 8 | 12/17/2016 12:00:00 AM To 12/18/2016 3:00:00 PM | Sch | 6134 | Other Main Steam Valves (including Vent And Drain.) | HP to HRH line cracked | |
| ST4 | 12/17/2016 12:00:00 AM To 12/18/2016 3:00:00 PM | Sch | 6134 | Other Main Steam Valves (including Vent And Drain.) | HP to HRH line cracked | |

## Roxboro Station

No Outages at Baseload Units During the Month.

## Sutton Energy Complex

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| ST1 | 12/1/2016 9:06:00 AM To 12/1/2016 11:59:00 AM | Unsch | 3210 | Circulating Water Pumps | STG trip due to high vibration on the Circulating Water Pump | |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

## December 2016
## Brunswick Nuclear Station

| | Unit 1 | | Unit 2 | |
|---|---|---|---|---|
| (A) MDC (mW) | 938 | | 932 | |
| (B) Period Hours | 744 | | 744 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 714,531 | 102.39 | 669,991 | 96.62 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 3,120 | 0.45 | 12,623 | 1.82 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -19,779 | -2.84 | 10,794 | 1.56 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 | 0 | 0.00 |
| (J) Net mWh Possible in Period | 697,872 | 100.00% | 693,408 | 100.00% |
| (K) Equivalent Availability (%) | | 99.55 | | 97.09 |
| (L) Output Factor (%) | | 102.39 | | 96.62 |
| (M) Heat Rate (BTU/NkWh) | | 10,299 | | 10,615 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

## December 2016
## Harris Nuclear Station

| | Unit 1 | |
|---|---|---|
| (A) MDC (mW) | 928 | |
| (B) Period Hours | 744 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 723,105 | 104.73 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 0 | 0.00 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -32,673 | -4.73 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 690,432 | 100.00% |
| (K) Equivalent Availability (%) | | 100.00 |
| (L) Output Factor (%) | | 104.73 |
| (M) Heat Rate (BTU/NkWh) | | 10,326 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

## December 2016
## Robinson Nuclear Station

| | Unit 2 | |
|---|---|---|
| (A) MDC (mW) | 741 | |
| (B) Period Hours | 744 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 590,377 | 107.09 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 0 | 0.00 |
| (F) Net mWh Not Gen due to Full Forced Outages | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -39,073 | -7.09 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 |
| (J) Net mWh Possible in Period | 551,304 | 100.00% |
| (K) Equivalent Availability (%) | | 100.00 |
| (L) Output Factor (%) | | 107.09 |
| (M) Heat Rate (BTU/NkWh) | | 10,019 |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## December 2016

### Lee Energy Complex

| | Unit 1A | Unit 1B | Unit 1C | Unit ST1 | Block Total |
|---|---|---|---|---|---|
| **(A) MDC (mW)** | 223 | 222 | 223 | 379 | 1,047 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 132,545 | 130,990 | 122,288 | 209,905 | 595,728 |
| **(D) Capacity Factor (%)** | 79.89 | 79.31 | 73.71 | 74.44 | 76.48 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 9,299 | 33,194 | 42,493 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 5.60 | 11.77 | 5.46 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 3,433 | 3,433 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 1.22 | 0.44 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 33,367 | 34,178 | 34,325 | 35,444 | 137,314 |
| **(N) Economic Dispatch: percent of Period Hrs** | 20.11 | 20.69 | 20.69 | 12.57 | 17.63 |
| **(O) Net mWh Possible in Period** | 165,912 | 165,168 | 165,912 | 281,976 | 778,968 |
| **(P) Equivalent Availability (%)** | 100.00 | 100.00 | 94.40 | 87.01 | 94.10 |
| **(Q) Output Factor (%)** | 81.64 | 82.92 | 81.60 | 84.37 | 82.86 |
| **(R) Heat Rate (BTU/NkWh)** | 9,653 | 10,096 | 10,396 | 2,397 | 7,346 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## December 2016

### Richmond County Station

| | Unit 7 | Unit 8 | Unit ST4 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 189 | 189 | 175 | 553 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 109,421 | 108,598 | 121,277 | 339,296 |
| **(D) Capacity Factor (%)** | 77.82 | 77.23 | 93.15 | 82.47 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 7,371 | 7,371 | 6,825 | 21,567 |
| **(F) Scheduled Outages: percent of Period Hrs** | 5.24 | 5.24 | 5.24 | 5.24 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 16 | 0 | 0 | 16 |
| **(J) Forced Outages: percent of Period Hrs** | 0.01 | 0.00 | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 23,808 | 24,647 | 2,098 | 50,553 |
| **(N) Economic Dispatch: percent of Period Hrs** | 16.93 | 17.53 | 1.61 | 12.29 |
| **(O) Net mWh Possible in Period** | 140,616 | 140,616 | 130,200 | 411,432 |
| **(P) Equivalent Availability (%)** | 94.75 | 94.76 | 94.76 | 94.75 |
| **(Q) Output Factor (%)** | 83.07 | 83.14 | 99.93 | 88.43 |
| **(R) Heat Rate (BTU/NkWh)** | 11,243 | 11,118 | 0 | 7,184 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## December 2016

### Richmond County Station

| | Unit 9 | Unit 10 | Unit ST5 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 214 | 214 | 246 | 674 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 135,995 | 141,153 | 166,471 | 443,619 |
| **(D) Capacity Factor (%)** | 85.42 | 88.66 | 90.96 | 88.47 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 2,935 | 2,935 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 1.60 | 0.59 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 0 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 23,221 | 18,063 | 13,618 | 54,902 |
| **(N) Economic Dispatch: percent of Period Hrs** | 14.58 | 11.34 | 7.44 | 10.95 |
| **(O) Net mWh Possible in Period** | 159,216 | 159,216 | 183,024 | 501,456 |
| **(P) Equivalent Availability (%)** | 100.00 | 100.00 | 98.40 | 99.41 |
| **(Q) Output Factor (%)** | 88.78 | 88.72 | 90.96 | 89.57 |
| **(R) Heat Rate (BTU/NkWh)** | 11,183 | 11,110 | 0 | 6,963 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## December 2016

### Roxboro Station

| | Unit 2 |
|---|---|
| **(A) MDC (mW)** | 673 |
| **(B) Period Hrs** | 744 |
| **(C) Net Generation (mWh)** | 139,061 |
| **(D) Capacity Factor (%)** | 27.77 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 361,651 |
| **(N) Economic Dispatch: percent of Period Hrs** | 72.23 |
| **(O) Net mWh Possible in Period** | 500,712 |
| **(P) Equivalent Availability (%)** | 100.00 |
| **(Q) Output Factor (%)** | 69.85 |
| **(R) Heat Rate (BTU/NkWh)** | 10,390 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are prestented.
Pre-commerical or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## December 2016

### Sutton Energy Complex

| | Unit 1A | Unit 1B | Unit ST1 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 225 | 225 | 267 | 717 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 134,682 | 129,596 | 153,755 | 418,033 |
| **(D) Capacity Factor (%)** | 80.46 | 77.42 | 77.40 | 78.36 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 770 | 770 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.39 | 0.14 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 457 | 457 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.23 | 0.09 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 32,718 | 37,804 | 43,667 | 114,189 |
| **(N) Economic Dispatch: percent of Period Hrs** | 19.54 | 22.58 | 21.98 | 21.41 |
| **(O) Net mWh Possible in Period** | 167,400 | 167,400 | 198,648 | 533,448 |
| **(P) Equivalent Availability (%)** | 100.00 | 100.00 | 99.38 | 99.77 |
| **(Q) Output Factor (%)** | 80.56 | 80.85 | 77.70 | 79.57 |
| **(R) Heat Rate (BTU/NkWh)** | 11,179 | 11,080 | 0 | 7,037 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Intermediate Power Plant Performance Review Plan
## December 2016

| | Mayo Station Unit 1 |
|---|---|
| **(A) MDC (mW)** | 746 |
| **(B) Period Hrs** | 744 |
| **(C) Net Generation (mWh)** | 99,302 |
| **(D) Net mWh Possible in Period** | 555,024 |
| **(E) Equivalent Availability (%)** | 100.00 |
| **(F) Output Factor (%)** | 57.30 |
| **(G) Capacity Factor (%)** | 17.89 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Intermediate Power Plant Performance Review Plan
## December 2016

| | | Roxboro Station | |
|---|---|---|---|
| | | **Unit 3** | **Unit 4** |
| **(A)** | **MDC (mW)** | 698 | 711 |
| **(B)** | **Period Hrs** | 744 | 744 |
| **(C)** | **Net Generation (mWh)** | 273,101 | -2,769 |
| **(D)** | **Net mWh Possible in Period** | 519,312 | 528,984 |
| **(E)** | **Equivalent Availability (%)** | 99.38 | 80.40 |
| **(F)** | **Output Factor (%)** | 64.67 | 0.00 |
| **(G)** | **Capacity Factor (%)** | 52.59 | 0.00 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

### January 2016 - December 2016
### Brunswick Nuclear Station

| | Unit 1 | | Unit 2 | |
|---|---|---|---|---|
| (A) MDC (mW) | 938 | | 932 | |
| (B) Period Hours | 8784 | | 8784 | |
| (C) Net Gen (mWh) and Capacity Factor (%) | 7,313,545 | 88.76 | 8,075,179 | 98.64 |
| (D) Net mWh Not Gen due to Full Schedule Outages | 608,590 | 7.39 | 0 | 0.00 |
| * (E) Net mWh Not Gen due to Partial Scheduled Outages | 153,481 | 1.86 | 46,646 | 0.57 |
| (F) Net mWh Not Gen due to Full Forced Outages | 165,979 | 2.01 | 0 | 0.00 |
| * (G) Net mWh Not Gen due to Partial Forced Outages | -2,203 | -0.02 | 64,863 | 0.79 |
| * (H) Net mWh Not Gen due to Economic Dispatch | 0 | 0.00 | 0 | 0.00 |
| * (I) Core Conservation | 0 | 0.00 | 0 | 0.00 |
| (J) Net mWh Possible in Period | 8,239,392 | 100.00% | 8,186,688 | 100.00% |
| (K) Equivalent Availability (%) | | 88.74 | | 99.27 |
| (L) Output Factor (%) | | 97.97 | | 98.64 |
| (M) Heat Rate (BTU/NkWh) | | 10,450 | | 10,713 |

* Estimate
FOOTNOTE: D and F Include Ramping Losses
FOOTNOTE: Brunswick Unit 1, K and M, and Brunswick Unit 2, C and M, Include prior period true ups

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

## January 2016 - December 2016
## Harris Nuclear Station

**Unit 1**

| | | |
|---|---|---|
| **(A) MDC (mW)** | **928** | |
| **(B) Period Hours** | **8784** | |
| **(C) Net Gen (mWh) and Capacity Factor (%)** | **7,513,051** | **92.17** |
| **(D) Net mWh Not Gen due to Full Schedule Outages** | **534,528** | **6.56** |
| *** (E) Net mWh Not Gen due to Partial Scheduled Outages** | **51,460** | **0.63** |
| **(F) Net mWh Not Gen due to Full Forced Outages** | **229,432** | **2.81** |
| *** (G) Net mWh Not Gen due to Partial Forced Outages** | **-176,919** | **-2.17** |
| *** (H) Net mWh Not Gen due to Economic Dispatch** | **0** | **0.00** |
| *** (I) Core Conservation** | **0** | **0.00** |
| **(J) Net mWh Possible in Period** | **8,151,552** | **100.00%** |
| **(K) Equivalent Availability (%)** | | **90.22** |
| **(L) Output Factor (%)** | | **101.70** |
| **(M) Heat Rate (BTU/NkWh)** | | **10,391** |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
## Base Load Power Plant Performance Review Plan

## January 2016 - December 2016
## Robinson Nuclear Station

**Unit 2**

| | | |
|---|---|---|
| **(A) MDC (mW)** | **741** | |
| **(B) Period Hours** | **8784** | |
| **(C) Net Gen (mWh) and Capacity Factor (%)** | **6,432,188** | **98.82** |
| **(D) Net mWh Not Gen due to Full Schedule Outages** | **157,462** | **2.42** |
| *** (E) Net mWh Not Gen due to Partial Scheduled Outages** | **14,070** | **0.22** |
| **(F) Net mWh Not Gen due to Full Forced Outages** | **97,281** | **1.49** |
| *** (G) Net mWh Not Gen due to Partial Forced Outages** | **-192,057** | **-2.95** |
| *** (H) Net mWh Not Gen due to Economic Dispatch** | **0** | **0.00** |
| *** (I) Core Conservation** | **0** | **0.00** |
| **(J) Net mWh Possible in Period** | **6,508,944** | **100.00%** |
| **(K) Equivalent Availability (%)** | | **95.81** |
| **(L) Output Factor (%)** | | **102.85** |
| **(M) Heat Rate (BTU/NkWh)** | | **10,452** |

*** Estimate**
**FOOTNOTE: D and F Include Ramping Losses**

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

### Lee Energy Complex

| | Unit 1A | Unit 1B | Unit 1C | Unit ST1 | Block Total |
|---|---|---|---|---|---|
| **(A) MDC (mW)** | 196 | 195 | 197 | 378 | 967 |
| **(B) Period Hrs** | 8,784 | 8,784 | 8,784 | 8,784 | 8,784 |
| **(C) Net Generation (mWh)** | 1,293,456 | 1,304,811 | 1,321,557 | 2,482,426 | 6,402,250 |
| **(D) Capacity Factor (%)** | 75.09 | 76.14 | 76.27 | 74.68 | 75.38 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 195,619 | 193,562 | 179,215 | 244,528 | 812,924 |
| **(F) Scheduled Outages: percent of Period Hrs** | 11.36 | 11.29 | 10.34 | 7.36 | 9.57 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 111,092 | 111,092 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 3.34 | 1.31 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 34,126 | 317 | 11,231 | 181,307 | 226,980 |
| **(J) Forced Outages: percent of Period Hrs** | 1.98 | 0.02 | 0.65 | 5.45 | 2.67 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 27,733 | 27,733 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.83 | 0.33 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 199,375 | 215,102 | 220,846 | 276,913 | 912,236 |
| **(N) Economic Dispatch: percent of Period Hrs** | 11.57 | 12.55 | 12.74 | 8.33 | 10.74 |
| **(O) Net mWh Possible in Period** | 1,722,576 | 1,713,792 | 1,732,848 | 3,324,000 | 8,493,216 |
| **(P) Equivalent Availability (%)** | 85.68 | 89.52 | 89.71 | 83.01 | 86.12 |
| **(Q) Output Factor (%)** | 87.22 | 89.60 | 89.51 | 85.66 | 87.54 |
| **(R) Heat Rate (BTU/NkWh)** | 9,363 | 9,367 | 9,271 | 3,982 | 7,259 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

### Richmond County Station

| | Unit 7 | Unit 8 | Unit ST4 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 172 | 170 | 169 | 512 |
| **(B) Period Hrs** | 8,784 | 8,784 | 8,784 | 8,784 |
| **(C) Net Generation (mWh)** | 988,408 | 980,652 | 1,118,533 | 3,087,593 |
| **(D) Capacity Factor (%)** | 65.40 | 65.56 | 75.28 | 68.72 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 386,382 | 376,373 | 385,293 | 1,148,047 |
| **(F) Scheduled Outages: percent of Period Hrs** | 25.57 | 25.16 | 25.93 | 25.55 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 5,594 | 5,594 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.38 | 0.12 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 4,301 | 12,134 | 0 | 16,435 |
| **(J) Forced Outages: percent of Period Hrs** | 0.28 | 0.81 | 0.00 | 0.37 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 4,458 | 4,458 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.30 | 0.10 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 132,141 | 126,666 | 0 | 230,770 |
| **(N) Economic Dispatch: percent of Period Hrs** | 8.74 | 8.47 | 0.00 | 5.14 |
| **(O) Net mWh Possible in Period** | 1,511,232 | 1,495,824 | 1,485,840 | 4,492,896 |
| **(P) Equivalent Availability (%)** | 73.53 | 73.33 | 73.19 | 73.86 |
| **(Q) Output Factor (%)** | 88.42 | 89.29 | 101.82 | 93.15 |
| **(R) Heat Rate (BTU/NkWh)** | 11,372 | 11,179 | 0 | 7,191 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

### Richmond County Station

| | Unit 9 | Unit 10 | Unit ST5 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 193 | 193 | 248 | 634 |
| **(B) Period Hrs** | 8,784 | 8,784 | 8,784 | 8,784 |
| **(C) Net Generation (mWh)** | 1,381,401 | 1,394,247 | 1,821,922 | 4,597,570 |
| **(D) Capacity Factor (%)** | 81.50 | 82.26 | 83.52 | 82.52 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 182,386 | 185,966 | 218,853 | 587,205 |
| **(F) Scheduled Outages: percent of Period Hrs** | 10.76 | 10.97 | 10.03 | 10.54 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 16,602 | 16,602 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.76 | 0.30 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 3,563 | 878 | 38,770 | 43,211 |
| **(J) Forced Outages: percent of Period Hrs** | 0.21 | 0.05 | 1.78 | 0.78 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 127,530 | 113,789 | 85,262 | 326,581 |
| **(N) Economic Dispatch: percent of Period Hrs** | 7.52 | 6.71 | 3.91 | 5.86 |
| **(O) Net mWh Possible in Period** | 1,694,880 | 1,694,880 | 2,181,408 | 5,571,168 |
| **(P) Equivalent Availability (%)** | 88.96 | 88.88 | 87.42 | 88.39 |
| **(Q) Output Factor (%)** | 92.58 | 93.12 | 95.23 | 93.78 |
| **(R) Heat Rate (BTU/NkWh)** | 11,391 | 11,288 | 0 | 6,846 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

### Roxboro Station

| | Unit 2 |
|---|---|
| **(A) MDC (mW)** | 672 |
| **(B) Period Hrs** | 8,784 |
| **(C) Net Generation (mWh)** | 2,850,976 |
| **(D) Capacity Factor (%)** | 48.31 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 597,932 |
| **(F) Scheduled Outages: percent of Period Hrs** | 10.13 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 2,584 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.04 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 28,228 |
| **(J) Forced Outages: percent of Period Hrs** | 0.48 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 7,962 |
| **(L) Forced Derates: percent of Period Hrs** | 0.13 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 2,413,679 |
| **(N) Economic Dispatch: percent of Period Hrs** | 40.90 |
| **(O) Net mWh Possible in Period** | 5,901,360 |
| **(P) Equivalent Availability (%)** | 89.22 |
| **(Q) Output Factor (%)** | 73.23 |
| **(R) Heat Rate (BTU/NkWh)** | 10,094 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Base Load Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

### Sutton Energy Complex

| | Unit 1A | Unit 1B | Unit ST1 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 198 | 198 | 265 | 662 |
| **(B) Period Hrs** | 8,784 | 8,784 | 8,784 | 8,784 |
| **(C) Net Generation (mWh)** | 1,444,793 | 1,476,393 | 1,797,795 | 4,718,981 |
| **(D) Capacity Factor (%)** | 83.03 | 84.84 | 77.16 | 81.22 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 78,106 | 53,566 | 49,918 | 181,590 |
| **(F) Scheduled Outages: percent of Period Hrs** | 4.49 | 3.08 | 2.14 | 3.13 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 45,548 | 45,548 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 1.95 | 0.78 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 1,586 | 770 | 2,356 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.09 | 0.03 | 0.04 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 1,724 | 1,724 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.07 | 0.03 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 217,245 | 208,598 | 434,166 | 860,009 |
| **(N) Economic Dispatch: percent of Period Hrs** | 12.48 | 11.99 | 18.63 | 14.80 |
| **(O) Net mWh Possible in Period** | 1,740,144 | 1,740,144 | 2,329,920 | 5,810,208 |
| **(P) Equivalent Availability (%)** | 95.75 | 97.02 | 95.81 | 96.02 |
| **(Q) Output Factor (%)** | 87.57 | 88.08 | 78.88 | 84.19 |
| **(R) Heat Rate (BTU/NkWh)** | 11,418 | 11,308 | 0 | 7,034 |

Footnote: (R) Includes Light Off BTU's
Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Intermediate Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

**Mayo Station**

| Units | Unit 1 |
|---|---|
| **(A) MDC (mW)** | 735 |
| **(B) Period Hrs** | 8,784 |
| **(C) Net Generation (mWh)** | 2,009,522 |
| **(D) Net mWh Possible in Period** | 6,455,280 |
| **(E) Equivalent Availability (%)** | 87.97 |
| **(F) Output Factor (%)** | 53.48 |
| **(G) Capacity Factor (%)** | 31.13 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
# Intermediate Power Plant
# Performance Review Plan
## January, 2016 through December, 2016

**Roxboro Station**

| Units | Unit 3 | Unit 4 |
|---|---|---|
| **(A) MDC (mW)** | 694 | 703 |
| **(B) Period Hrs** | 8,784 | 8,784 |
| **(C) Net Generation (mWh)** | 2,239,706 | 2,176,191 |
| **(D) Net mWh Possible in Period** | 6,095,280 | 6,178,656 |
| **(E) Equivalent Availability (%)** | 93.17 | 93.65 |
| **(F) Output Factor (%)** | 66.64 | 71.50 |
| **(G) Capacity Factor (%)** | 36.74 | 35.22 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Outages for 100 mW or Larger Units
## December, 2016

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | Total |
| Brunswick 1 | 938 | 0.00 | 0.00 | 0.00 |
| Brunswick 2 | 932 | 0.00 | 0.00 | 0.00 |
| Harris 1 | 928 | 0.00 | 0.00 | 0.00 |
| Robinson 2 | 741 | 0.00 | 0.00 | 0.00 |

# Duke Energy Progress
## Outages for 100 mW or Larger Units
## December 2016

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | Total Outage Hours |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | |
| Asheville Steam 1 | 192 | 0.00 | 119.05 | 119.05 |
| Asheville Steam 2 | 192 | 0.00 | 15.62 | 15.62 |
| Asheville CT 3 | 185 | 11.00 | 0.00 | 11.00 |
| Asheville CT 4 | 185 | 79.20 | 0.00 | 79.20 |
| Darlington CT 12 | 133 | 17.62 | 0.00 | 17.62 |
| Darlington CT 13 | 133 | 17.62 | 0.00 | 17.62 |
| Lee Energy Complex CC 1A | 223 | 0.00 | 0.00 | 0.00 |
| Lee Energy Complex CC 1B | 222 | 0.00 | 0.00 | 0.00 |
| Lee Energy Complex CC 1C | 223 | 0.00 | 41.70 | 41.70 |
| Lee Energy Complex CC ST1 | 379 | 0.00 | 87.58 | 87.58 |
| Mayo Steam 1 | 746 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 1 | 183 | 235.75 | 0.00 | 235.75 |
| Richmond County CC 2 | 183 | 289.77 | 0.00 | 289.77 |
| Richmond County CC 3 | 185 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 4 | 186 | 57.87 | 1.50 | 59.37 |
| Richmond County CC 6 | 179 | 112.98 | 2.60 | 115.58 |
| Richmond County CC 7 | 189 | 39.00 | 0.08 | 39.08 |
| Richmond County CC 8 | 189 | 39.00 | 0.00 | 39.00 |
| Richmond County CC ST4 | 175 | 39.00 | 0.00 | 39.00 |
| Richmond County CC 9 | 214 | 0.00 | 0.00 | 0.00 |
| Richmond County CC 10 | 214 | 0.00 | 0.00 | 0.00 |
| Richmond County CC ST5 | 246 | 0.00 | 0.00 | 0.00 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.

# Duke Energy Progress
## Outages for 100 mW or Larger Units
## December 2016

| Unit Name | Capacity Rating (mW) | Full Outage Hours | | Total Outage Hours |
|---|---|---|---|---|
| | | Scheduled | Unscheduled | |
| Roxboro Steam 1 | 380 | 0.00 | 0.00 | 0.00 |
| Roxboro Steam 2 | 673 | 0.00 | 0.00 | 0.00 |
| Roxboro Steam 3 | 698 | 0.00 | 0.00 | 0.00 |
| Roxboro Steam 4 | 711 | 0.00 | 0.00 | 0.00 |
| Sutton Energy Complex CC 1A | 225 | 0.00 | 0.00 | 0.00 |
| Sutton Energy Complex CC 1B | 225 | 0.00 | 0.00 | 0.00 |
| Sutton Energy Complex CC ST1 | 267 | 0.00 | 2.88 | 2.88 |
| Wayne County CT 10 | 192 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 11 | 192 | 0.00 | 0.63 | 0.63 |
| Wayne County CT 12 | 193 | 0.00 | 0.00 | 0.00 |
| Wayne County CT 13 | 185 | 0.00 | 2.67 | 2.67 |
| Wayne County CT 14 | 197 | 0.00 | 0.00 | 0.00 |

Units in commercial operation for the full month are presented.
Pre-commercial or partial month commercial operations are not included.